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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,149	08/23/2006	Jens K. Norskov	G3781.0008/P008	8727

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EXAMINER	
SINGH, PREM C	

ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
10/02/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/567,149	NORSKOV ET AL.	
	Examiner	Art Unit	
	PREM C. SINGH	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9 and 10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9 and 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosset (US Patent 3,375,288).

3. With respect to claims 9 and 10, Rosset discloses a catalytic process for the dehydrogenation of an organic compound by contacting under dehydrogenation conditions with a supported catalyst consisting of nickel as the active catalytic compound promoted with silver (See column 1, lines 25-26; column 2, lines 7-18). Rosset also discloses that support of the catalyst is alumina, chromia-alumina, chromia-magnesia (See column 2, lines 10-13).

Rosset invention does not specifically disclose silver percentage of the catalyst, however, the invention does disclose "The particular composition of a given catalyst as it may be employed in the present invention will, of course, be determined in accordance with the particular feedstock, reaction conditions and extent of conversion desired, in a manner known to those skilled in the art." (Column 2, lines 25-30). Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify Rosset invention and use a percentage of silver in the catalyst in a range, including as claimed, for an effective dehydrogenation.

Response to Arguments

4. Applicant's arguments filed 09/08/2008 have been fully considered but they are not persuasive.

5. The Applicant argues,

"The subject matter of claims 9 mad 10 would not have been obvious over Rosset. In the June10, 2008 Office Action, the examiner asserts that Rosset discloses a catalytic process for the dehydrogenation of an organic compound in which a supported catalyst consisting of nickel as the active catalytic compound promoted with silver is used. Applicants disagree with the examiner's assertion. Rosset merely teaches the use of nickel oxide-alumina, or a catalyst containing other components in combination with an oxide of nickel. Rosset does not teach or suggest any catalyst which consists of nickel promoted with silver or gold".

The Applicant's argument is not persuasive because Rosset discloses, "The various dehydrogenation catalysts suitable for use in the present invention include.. .....nickel oxide-alumina,.....in combination with a stabilizer such as oxides of silver....." (Column 2, lines 7-18).

6. The Applicant argues,

"As detailed in the specification of the present application (page 3, lines 18 to 21; and page 5, lines 11 to 13), the nickel is used as metallic (pure) nickel and not as a nickel compound. Nickel oxide is activated by reduction with hydrogen to obtain the active catalyst (see Example 1). Consequently, the claimed process is neither suggested by nor rendered obvious over Rosset".

The Applicant's argument is not persuasive because the claim does not exclude nickel oxide. It is to be noted that typical dehydrogenation catalysts disclosed by Rosset (See column 2, lines 7-18) are typically activated by passing hydrogen (evidenced by Maunders et al, US Patent 5,550,309; column 2, lines 32-40; column 6, lines 18-20).

7. The Applicant argues,

"Moreover, the object of the claimed invention is different from that of Rosset. The crux of the claimed invention is to provide a catalytic process in which a modified nickel catalyst (which is more suitable for use in a dehydrogenation reaction than a pure nickel catalyst) is used. On the other hand, the crux of Rosset is a dehydrogenation process that can be conducted at lower dehydrogenation temperatures. For at least these reasons, the Office Action fails to establish a *prima facie* case of obviousness".

The Applicant's argument is not persuasive because the claimed invention is drawn to a catalytic process for the dehydrogenation of an organic compound using a nickel catalyst promoted with silver or gold. Rosset discloses a process for the dehydrogenation of an organic compound using "dehydrogenation catalysts well known in the art" (See column 2, lines 9-10) including nickel. Any of these catalysts is promoted with silver oxide (See column 2, lines 9-22).

Thus, the Office action has established a *prima facie* case of obviousness.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PREM C. SINGH whose telephone number is (571)272-6381. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PS 092008

/Glenn A Caldarola/
Acting SPE of Art Unit 1797